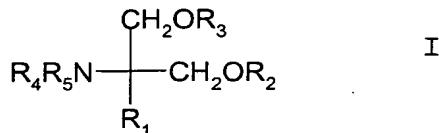


## CLAIMS

1. Use of a sphingosine-1-phosphate (S1P) receptor agonist or a pharmaceutically acceptable salt thereof in the preparation of a medicament for treating progressive dementia or brain degeneration.
2. Use of a sphingosine-1-phosphate receptor agonist or a pharmaceutically acceptable salt thereof in the preparation of a medicament for treating  $\beta$ -amyloid-related inflammatory diseases or disorders.
3. Use of a sphingosine-1-phosphate (S1P) receptor agonist or a pharmaceutically acceptable salt thereof in the preparation of a medicament for reducing or inhibiting loss of cognitive abilities.
4. A pharmaceutical composition for use in treating progressive dementia or brain degeneration,  $\beta$ -amyloid-related inflammatory diseases or disorders or for reducing or inhibiting loss of cognitive abilities comprising a sphingosine-1-phosphate (S1P) receptor agonist or a pharmaceutically acceptable salt thereof together with one or more pharmaceutically acceptable diluents or carriers therefor.
5. A pharmaceutical combination comprising a) a first agent which is a S1P receptor agonist or a pharmaceutically acceptable salt thereof and b) a co-agent useful in the alleviation or treatment of brain degenerative diseases or progressive dementia.
6. A combination according to claim 5, wherein co-agent b) is selected from an AMPA receptor agonist, a nootropic or anti-inflammatory agent or a painkiller.
7. A method for treating progressive dementia or brain degeneration or  $\beta$ -amyloid-related inflammatory diseases or disorders or for reducing or inhibiting loss of cognitive abilities in a subject in need thereof, comprising administering to said subject a therapeutically effective amount of a sphingosine-1-phosphate (S1P) receptor agonist or a pharmaceutically acceptable salt thereof.
8. A method according to claim 7 comprising co-administration, e.g. concomitantly or in sequence, of b) a co-agent useful in the alleviation or treatment of brain degenerative diseases or progressive dementia.

9. A method, composition, combination or use according to any one of the preceding claims, wherein the S1P receptor agonist is compound of formula I



wherein  $\text{R}_1$  is a straight- or branched ( $\text{C}_{12-22}$ )carbon chain

- which may have in the chain a bond or a hetero atom selected from a double bond, a triple bond, O, S, NR<sub>6</sub>, wherein R<sub>6</sub> is H, alkyl, aralkyl, acyl or alkoxy carbonyl, and carbonyl, and/or
- which may have as a substituent alkoxy, alkenyloxy, alkynyoxy, aralkyloxy, acyl, alkylamino, alkylthio, acylamino, alkoxy carbonyl, alkoxy carbonyl amino, acyloxy, alkyl carbamoyl, nitro, halogen, amino, hydroxy imino, hydroxy or carboxy; or

$\text{R}_1$  is

- a phenylalkyl wherein alkyl is a straight- or branched ( $\text{C}_{6-20}$ )carbon chain; or
- a phenylalkyl wherein alkyl is a straight- or branched ( $\text{C}_{1-30}$ )carbon chain wherein said phenylalkyl is substituted by
- a straight- or branched ( $\text{C}_{6-20}$ )carbon chain optionally substituted by halogen,
- a straight- or branched ( $\text{C}_{6-20}$ )alkoxy chain optionally substituted by halogen,
- a straight- or branched ( $\text{C}_{6-20}$ )alkenyloxy,
- phenylalkoxy, halophenylalkoxy, phenylalkoxyalkyl, phenoxyalkoxy or phenoxyalkyl,
- cycloalkylalkyl substituted by  $\text{C}_{6-20}$ alkyl,
- heteroarylalkyl substituted by  $\text{C}_{6-20}$ alkyl,
- heterocyclic  $\text{C}_{6-20}$ alkyl or
- heterocyclic alkyl substituted by  $\text{C}_{2-20}$ alkyl,

and wherein

the alkyl moiety may have

- in the carbon chain, a bond or a heteroatom selected from a double bond, a triple bond, O, S, sulfinyl, sulfonyl, or NR<sub>6</sub>, wherein R<sub>6</sub> is as defined above, and
- as a substituent alkoxy, alkenyloxy, alkynyoxy, aralkyloxy, acyl, alkylamino, alkylthio, acylamino, alkoxy carbonyl, alkoxy carbonyl amino, acyloxy, alkyl carbamoyl, nitro, halogen, amino, hydroxy or carboxy, and

each of R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub>, independently, is H, C<sub>1-4</sub> alkyl or acyl

or a pharmaceutically acceptable salt thereof.

10. A method, composition, combination or use according to claim 9, wherein the S1P receptor agonist is 2-amino-2-[2-(4-octylphenyl) ethyl]propane-1,3-diol in free form or in a pharmaceutically acceptable salt form.